

Comparisons of Job Characteristics

Focus Occupation: [Environmental Engineering Technicians \(17-3025\)](#)

Associated Occupation: [Geological and Petroleum Technicians \(19-4041\)](#)

[Compare Knowledge](#)

[Compare Skills](#)

[Compare Abilities](#)

[Compare Detailed Work Activities](#)

[Compare Tools and Technologies](#)

<<	Focus occupation element is much lower
<	Focus occupation element is lower
0	Focus occupation element is at a similar level
>	Focus occupation element is at a higher level
>>	Focus occupation element is at a much higher level

Knowledge

Similarity of Focus Occupation to Associated Occupation: 67

Focus Occupation: Environmental Engineering Technicians (17-3025)
Associated Occupation: Geological and Petroleum Technicians (19-4041)

Associated Occupation's Key Knowledge Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating	Evaluation of Focus Occupation	
Mathematics	9.2	14.8	11.2	<<	Extensive education and/or training may be required
Computers and Electronics	8.4	14.4	6.2	<<	Extensive education and/or training may be required
Engineering and Technology	5.7	12.0	15.8	>>	Current knowledge level is likely more than sufficient
Geography	3.9	11.6	6.2	<<	Extensive education and/or training may be required
Physics	4.3	11.2	10.2	0	Current knowledge level may be sufficient
Chemistry	4.8	10.7	7.0	<<	Extensive education and/or training may be required

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Skills

Similarity of Focus Occupation to Associated Occupation: 89

Focus Occupation: Environmental Engineering Technicians (17-3025)
Associated Occupation: Geological and Petroleum Technicians (19-4041)

Associated Occupation's Key Skills Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating	Evaluation of Focus Occupation	
Science	4.5	9.8	8.3	<	A higher skill level may be required
Mathematics	6.2	7.8	11.3	>>	Skill level is likely more than sufficient
Troubleshooting	4.5	6.1	7.4	>	Skill level is likely sufficient
Equipment Selection	3.3	4.7	5.0	0	Current skill level may be sufficient

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Abilities		Similarity of Focus Occupation to Associated Occupation: 92			
Focus Occupation: Environmental Engineering Technicians (17-3025) Associated Occupation: Geological and Petroleum Technicians (19-4041)					
Associated Occupation's Key Abilities Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating	Evaluation of Focus Occupation	
Written Comprehension	11.0	13.0	16.6	>>	Current ability level is likely more than sufficient
Oral Comprehension	12.5	12.6	14.4	>	Current ability level is likely sufficient
Oral Expression	12.4	12.3	12.7	0	Current ability level may be sufficient
Near Vision	11.1	11.1	14.7	>>	Current ability level is likely more than sufficient
Inductive Reasoning	10.2	10.7	13.6	>>	Current ability level is likely more than sufficient
Information Ordering	9.9	10.7	13.3	>	Current ability level is likely sufficient
Written Expression	9.8	10.7	12.0	>	Current ability level is likely sufficient
Deductive Reasoning	10.6	10.4	14.5	>>	Current ability level is likely more than sufficient
Category Flexibility	9.0	10.3	11.8	>	Current ability level is likely sufficient
Flexibility of Closure	7.8	9.9	7.3	<<	Extensive improvement in abilities may be required
Mathematical Reasoning	6.3	8.4	10.6	>	Current ability level is likely sufficient
Number Facility	6.3	8.4	10.6	>	Current ability level is likely sufficient

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Activities that Both Occupations Have in Common		Similarity of Focus Occupation to Associated Occupation: 82
Focus Occupation: Environmental Engineering Technicians (17-3025) Associated Occupation: Geological and Petroleum Technicians (19-4041)		
Work Activities	Exclusivity of Activity	
Analyze scientific research data or investigative findings	27	
Analyze technical data, designs, or preliminary specifications	47	
Collect samples for testing	58	
Communicate technical information	4	
Examine engineering documents for completeness or accuracy	62	
Explain complex mathematical information	30	
Follow safe waste disposal procedures	50	
Maintain records, reports, or files	5	
Read technical drawings	7	

Record test results, test procedures, or inspection data	48
Understand engineering data or reports	48
Understand technical operating, service or repair manuals	6
Use chemical testing or analysis procedures	54
Use hazardous materials information	35
Use knowledge of materials testing procedures	70
Use knowledge of metric system	39
Use laboratory equipment	60
Use precision measuring tools or equipment	17
Use scientific research methodology	21

Not all positions in these occupations will necessarily perform all of the listed activities. The exclusivity rating is an indication of how unique the activity is amongst all occupations. The maximum rating is 100. High scores indicate that only a small number of occupations engage in that activity.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Tools and Technologies that Both Occupations Have in Common

Similarity of Focus
Occupation to Associated
Occupation: 84

Focus Occupation: Environmental Engineering Technicians (17-3025)
Associated Occupation: Geological and Petroleum Technicians (19-4041)

Tools and Technologies	Exclusivity
Audio and visual equipment	4
Business function specific software	1
Cameras	2
Chemical evaluation instruments and supplies	10
Chromatographic measuring instruments and accessories	16
Computer data input devices	2
Computers	1
Content authoring and editing software	1
Crystallography equipment	23
Data management and query software	1
Electrochemical measuring instruments and accessories	9
Gas analyzers and monitors	10
General laboratory glassware and plasticware and supplies	13
Indicating and recording instruments	2
Industry specific software	1
Information exchange software	1
Laboratory decanting and distilling and evaporating and extracting equipment and supplies	19
Laboratory mixing and stirring and shaking equipment and supplies	19
Laboratory ovens and accessories	15
Laboratory pumps and tubing	23
Liquid and solid and elemental analyzers	19
Pipettes and liquid handling equipment and supplies	16
Sampling equipment	12
Soil measuring equipment	20
Spectroscopic equipment	10
Temperature and heat measuring instruments	6

Viewing and observing instruments and accessories	4
Water treatment and supply equipment	21
Weight measuring instruments	7

Not all positions in these occupations will necessarily use all of the listed tools and technologies. The exclusivity rating is an indication of how unique the tool or technology is amongst all occupations. The maximum rating is 100. High scores indicate that only a small number of occupations use that tool or technology.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.